FIG. 1

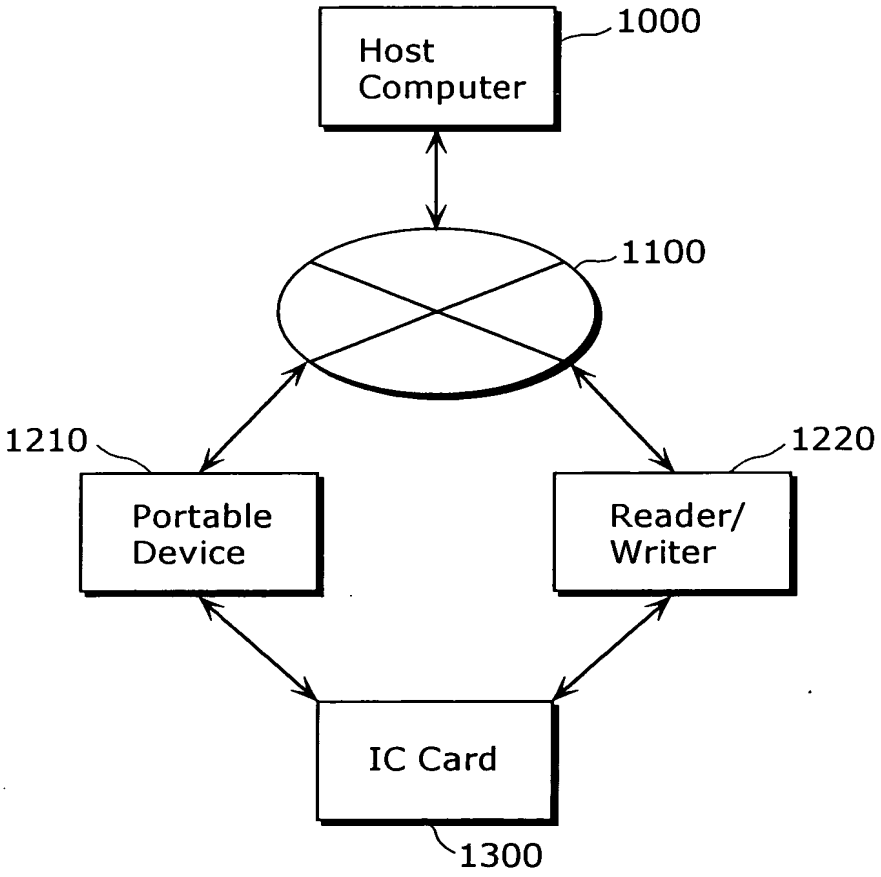

Host Computer
1000
1100
1210
1220
Portable Device
Reader/ Writer
IC Card
1300

FIG. 2

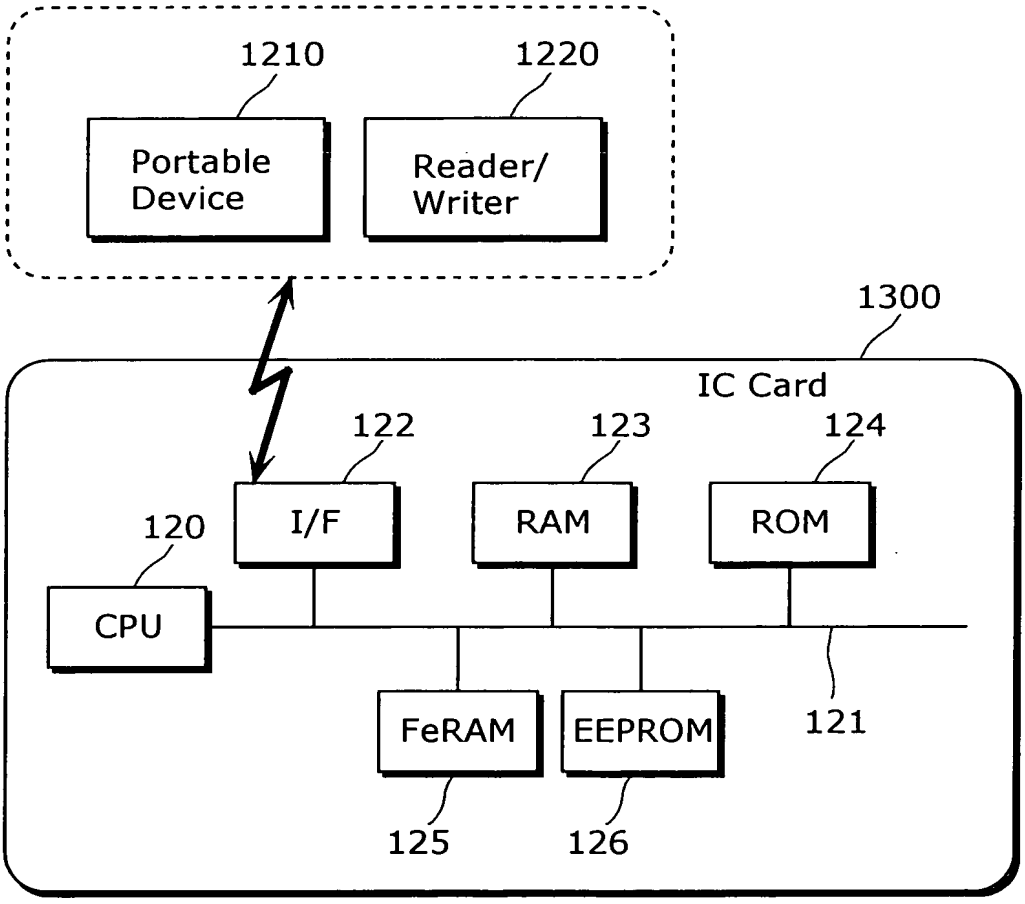

1210
1220
Portable Device
Reader/ Writer
1300
IC Card
122
123
124
120
I/F
RAM
ROM
CPU
FeRAM
EEPROM
121
125
126

FIG. 3

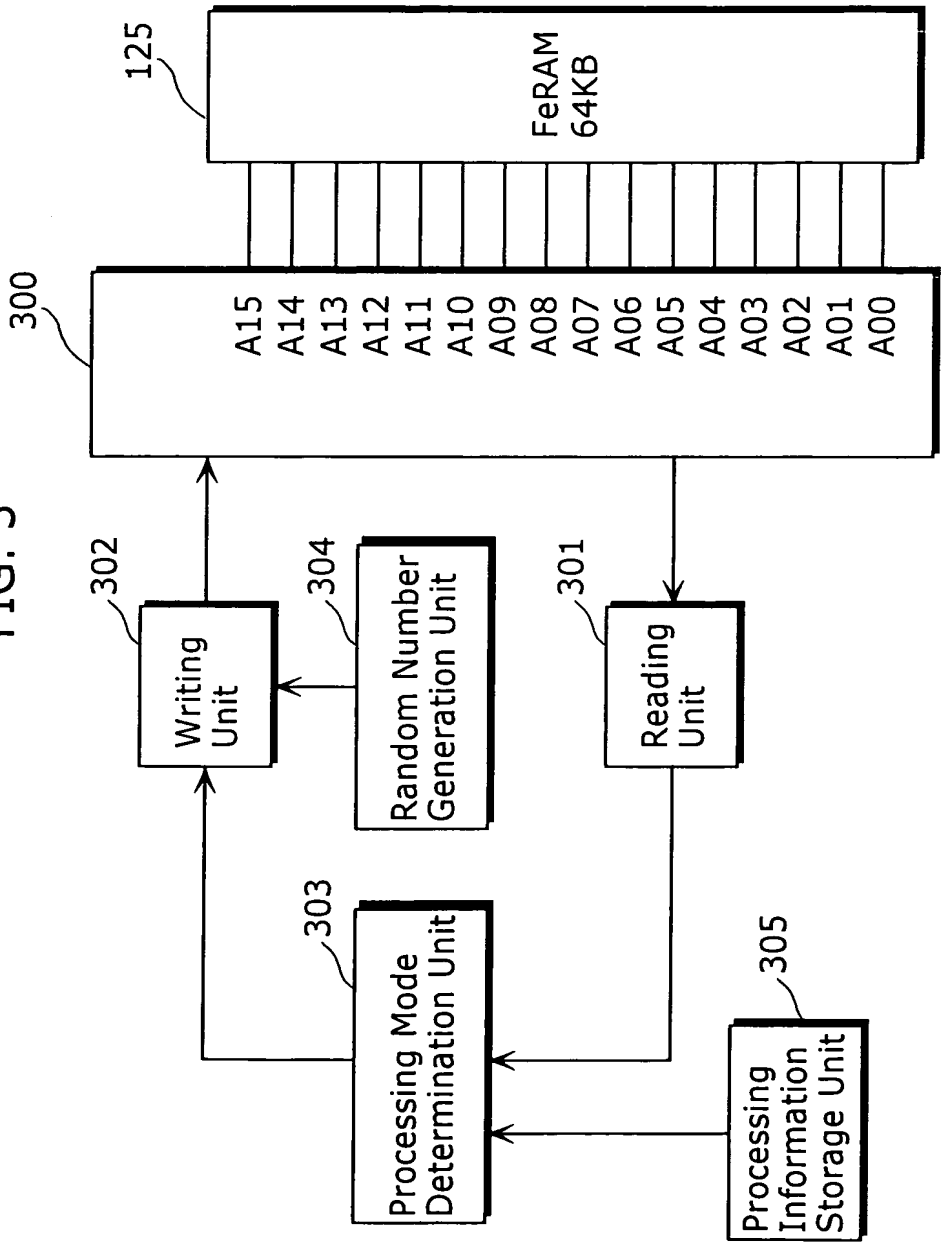

125
FeRAM
64KB
300
A15
A14
A13
A12
A11
A10
A09
A08
A07
A06
A05
A04
A03
A02
A01
A00
302
Writing Unit
304
Random Number Generation Unit
301
Reading Unit
303
Processing Mode Determination Unit
305
Processing Information Storage Unit

FIG. 4

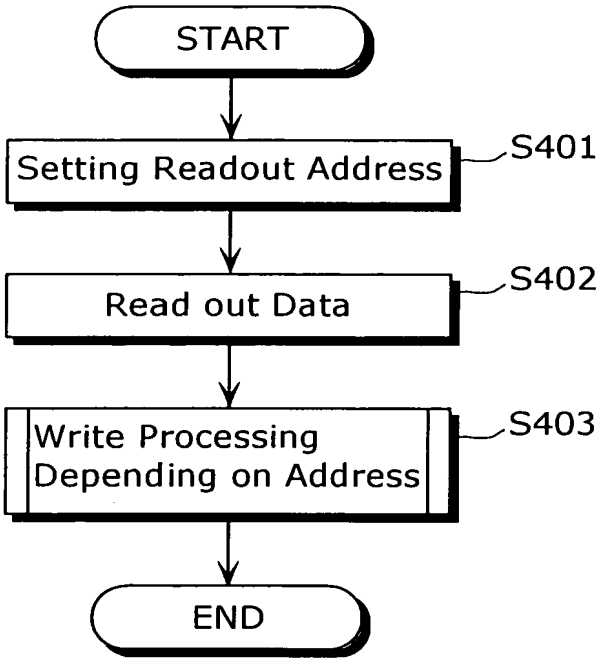

START
Setting Readout Address
S401
Read out Data
S402
Write Processing Depending on Address
S403
END

FIG. 5

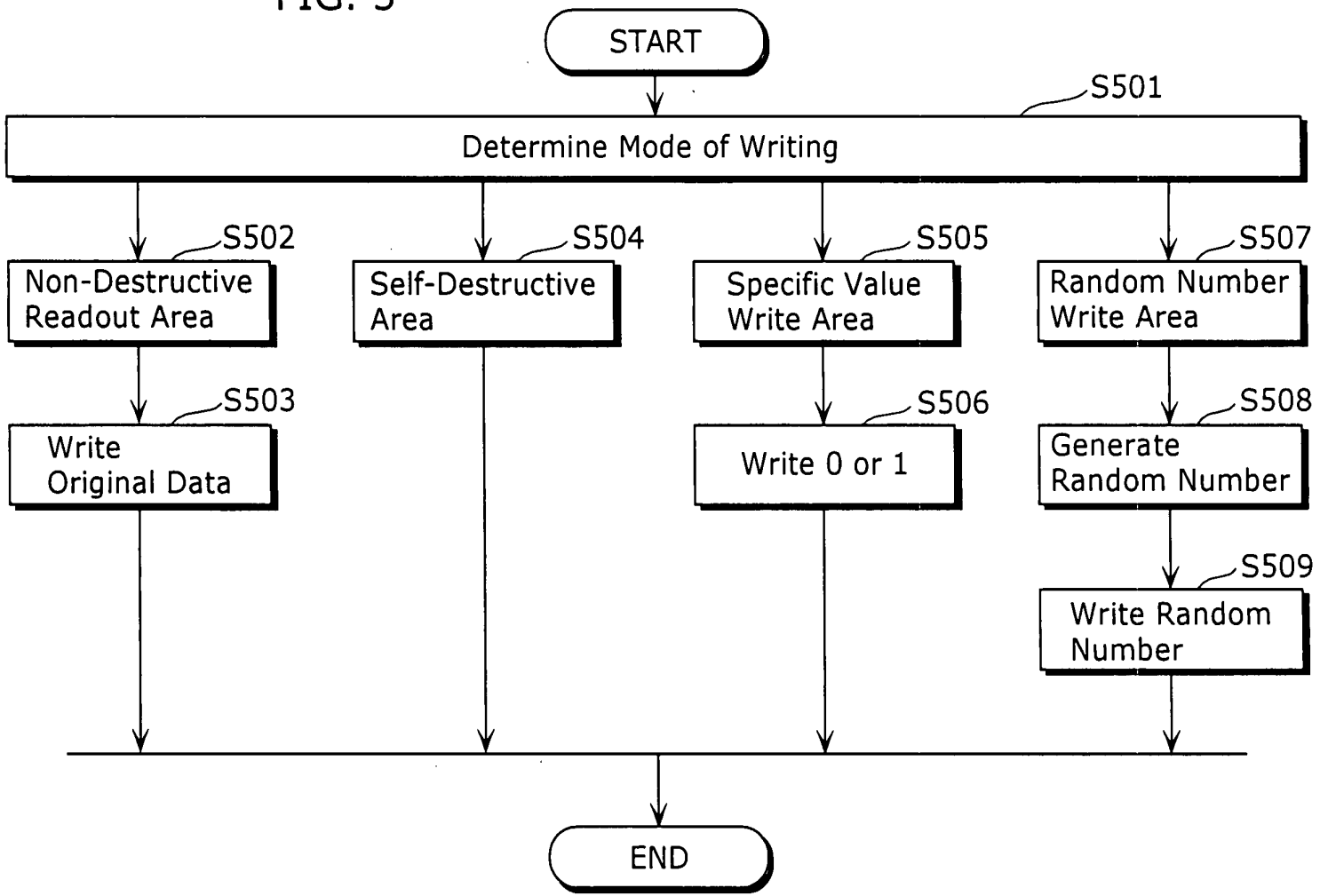
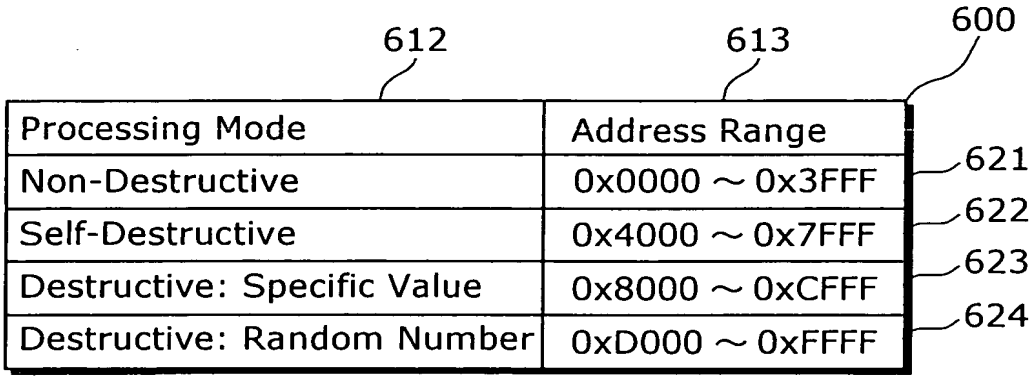

START
S501
Determine Mode of Writing
S502
Non-Destructive Readout Area
S503
Write Original Data
S504
Self-Destructive Area
S505
Specific Value Write Area
S506
Write 0 or 1
S507
Random Number Write Area
S508
Generate Random Number
S509
Write Random Number
END

FIG. 6



Processing Mode	Address Range
Non-Destructive	0x0000 ~ 0x3FFF
Self-Destructive	0x4000 ~ 0x7FFF
Destructive: Specific Value	0x8000 ~ 0xCFFF
Destructive: Random Number	0xD000 ~ 0xFFFF

FIG. 7

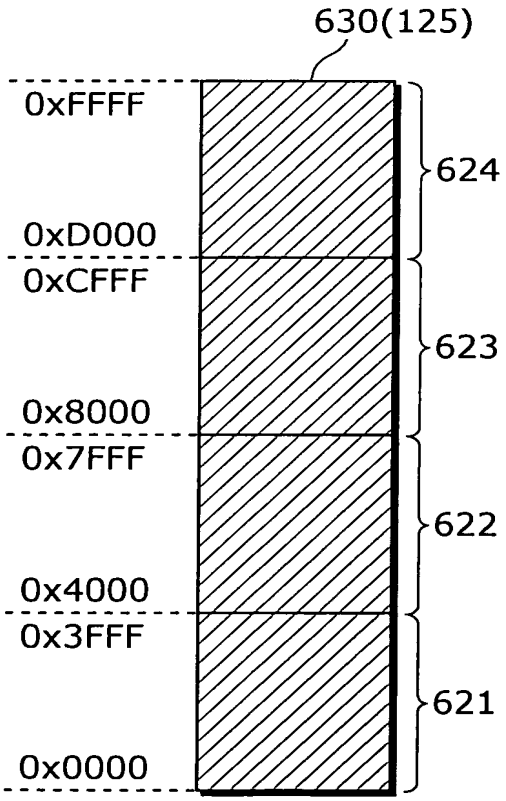


FIG. 8

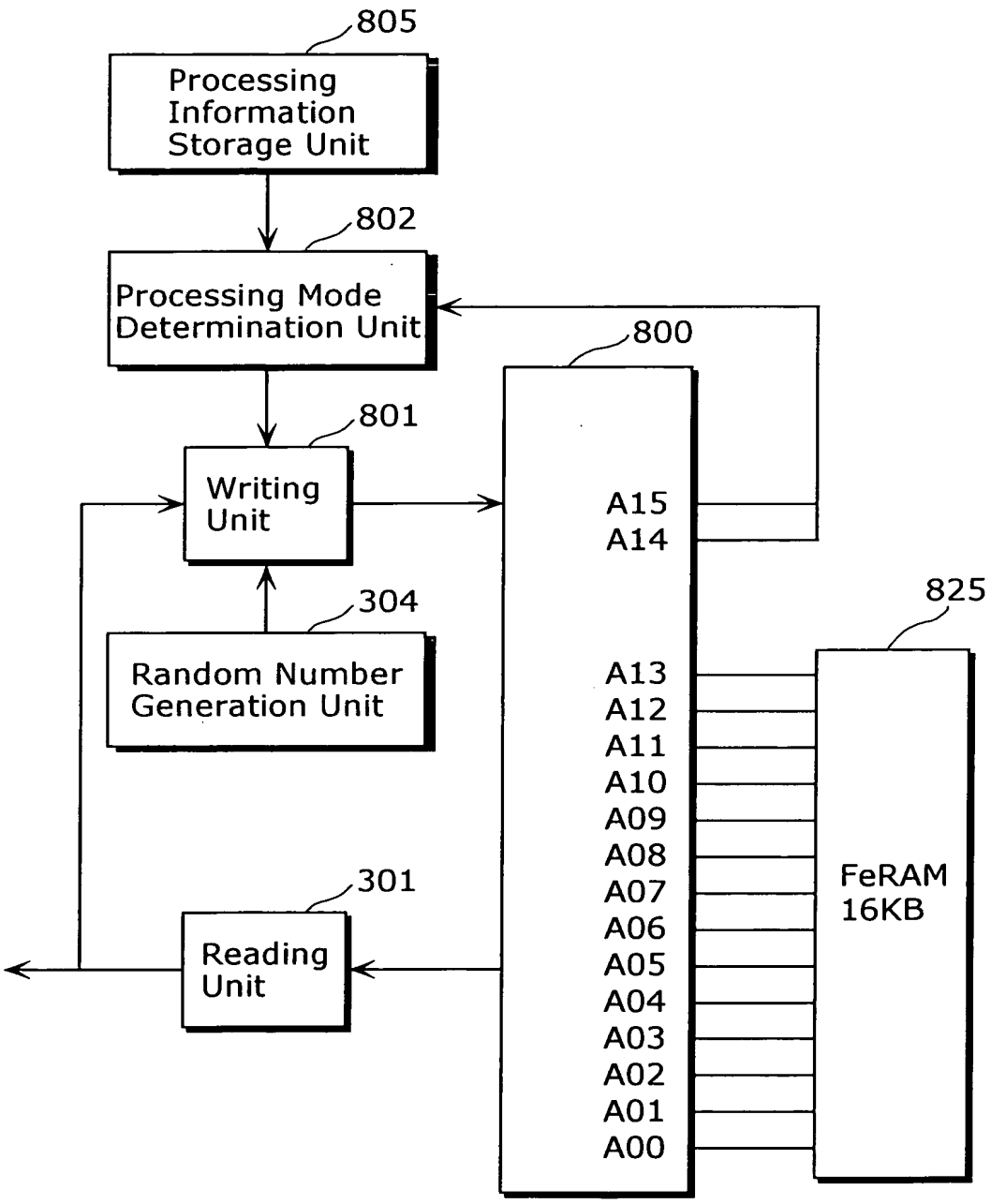
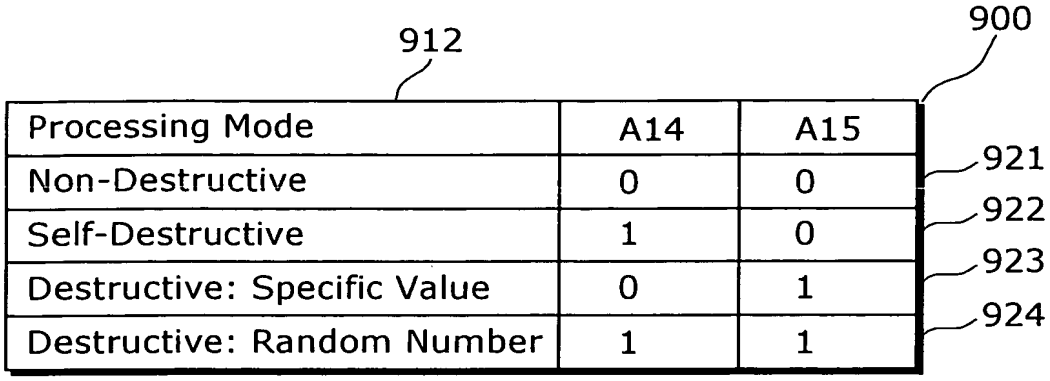

805
Processing Information Storage Unit
802
Processing Mode Determination Unit
801
Writing Unit
304
Random Number Generation Unit
301
Reading Unit
800
A15
A14
A13
A12
A11
A10
A09
A08
A07
A06
A05
A04
A03
A02
A01
A00
825
FeRAM 16KB

FIG. 9



Processing Mode	A14	A15
Non-Destructive	0	0
Self-Destructive	1	0
Destructive: Specific Value	0	1
Destructive: Random Number	1	1

FIG. 10

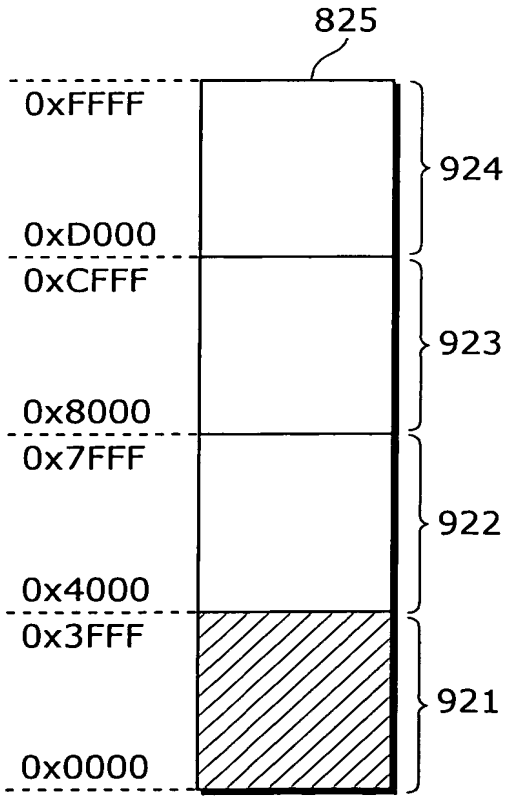


FIG. 11

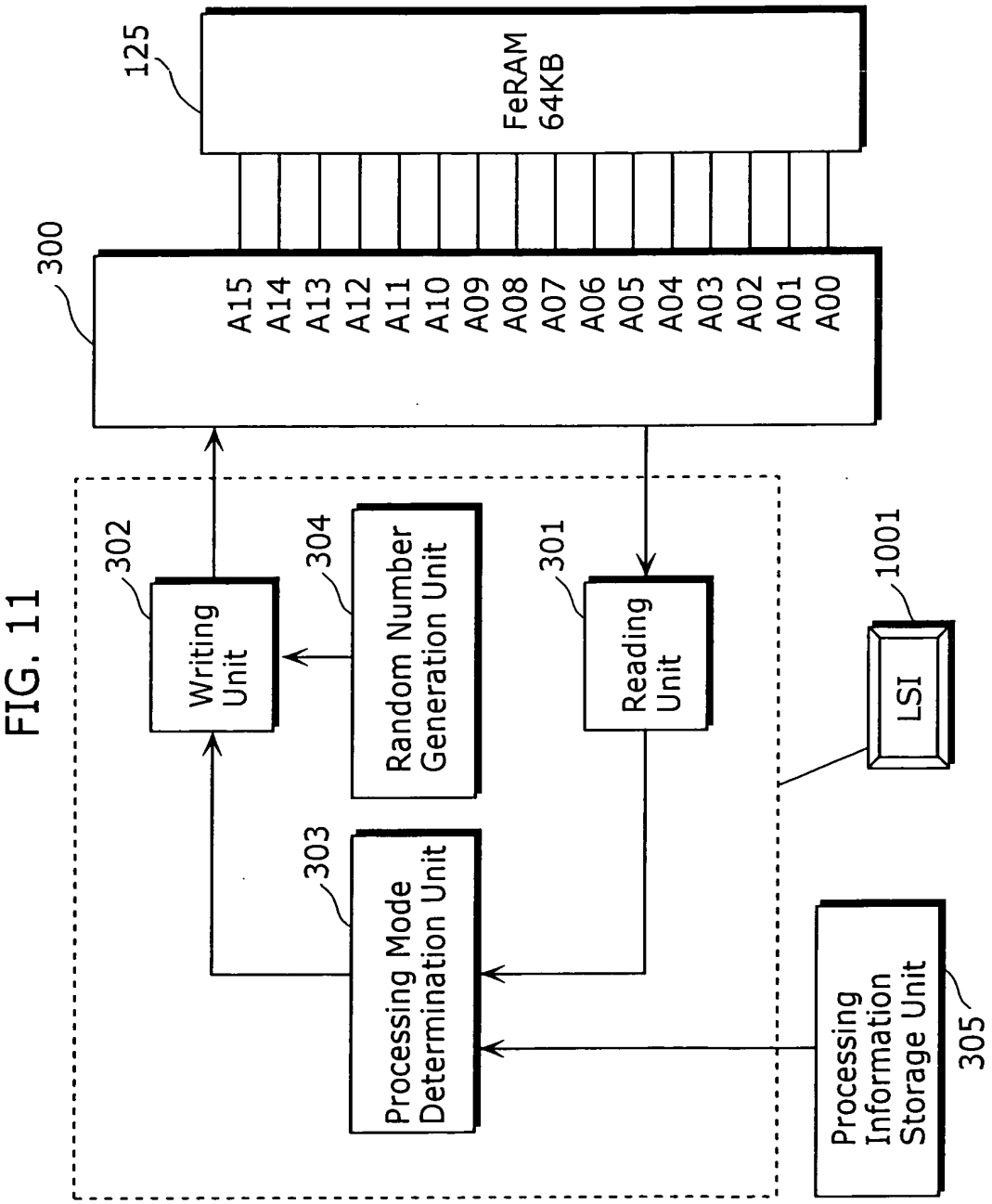
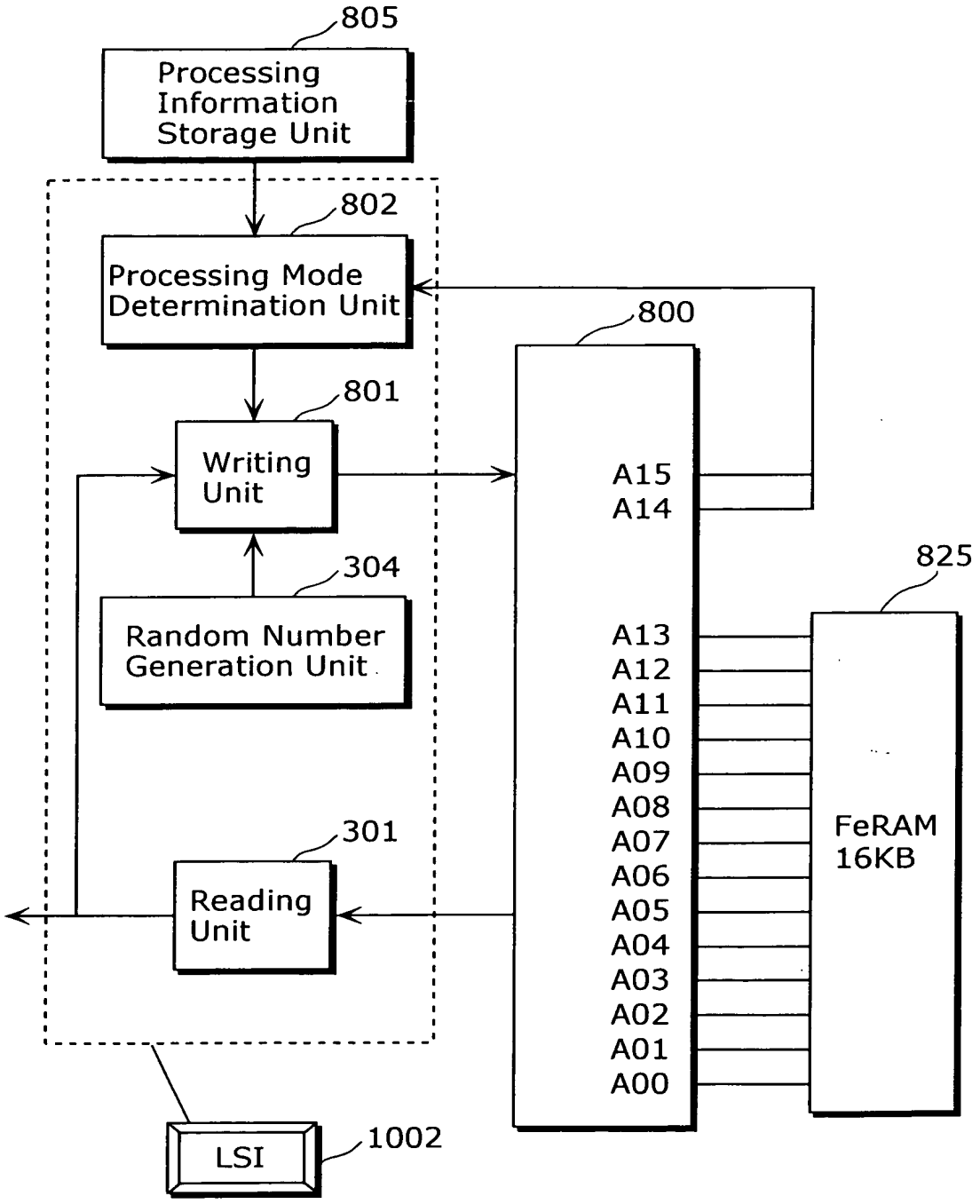

125
FeRAM
64KB
300
A15
A14
A13
A12
A11
A10
A09
A08
A07
A06
A05
A04
A03
A02
A01
A00
302
Writing Unit
304
Random Number Generation Unit
301
Reading Unit
1001
LSI
303
Processing Mode Determination Unit
Processing Information Storage Unit
305

FIG. 12


805
Processing Information Storage Unit
802
Processing Mode Determination Unit
801
Writing Unit
304
Random Number Generation Unit
301
Reading Unit
LSI
1002
800
A15
A14
A13
A12
A11
A10
A09
A08
A07
A06
A05
A04
A03
A02
A01
A00
825
FeRAM 16KB